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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,447	07/18/2006	Atsushi Nakadaira	293352US40PCT	4713

22850 7590 01/29/2010
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EXAMINER

HICKS, CHARLES V

ART UNIT	PAPER NUMBER
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2629

NOTIFICATION DATE	DELIVERY MODE
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01/29/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/586,447	Applicant(s) NAKADAIRA ET AL.	
	Examiner CHARLES HICKS	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8 and 10-50 is/are pending in the application.
- 4a) Of the above claim(s) 3-8, 10-12, 14-20 and 22-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 13 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/08/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is responsive to amendments filed 11/24/2009. Claims 1 and 9 are cancelled. Claims 2, 5-8, 13 and 21 are amended. Claims 3-8, 10-12, 14-20 and 22-50 have been withdrawn. Claims 2, 13 and 21 are currently being considered in this action.

The claimed computer readable storage medium of claim 21 is being interpreted as the magnetic, electrical, and optical recording mediums of paragraphs [0554, 0733, 0884, 1009] of the PG Publication of the current specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carl et al. (US 2005/0168437) in view of Geshwind (US 6,590,573).

In reference to claim 2, Carl teaches a three-dimensional pointing method for pointing at a desired point in a three-dimensional space represented on a display apparatus based on two-dimensional coordinates of a position that is pointed at by a pen tip of an input pen on a predetermined detection plane (Carl, Fig. 5; pg. 6, par. 66),

an inclination angle that is an angle between an axis of the input pen and the detection plane (Carl, Fig. 5; pg. 2, par. 12),

and a direction angle that is an angle between a projection of the axis of the input pen onto the detection plane and a predetermined line on the detection plane (Carl, Fig. 5; pg. 2, par. 12, 13),

the method comprising: obtaining an extension of the axis of the input pen in the three-dimensional space based on the inclination angle and the direction angle of the input pen (Carl, Fig. 5; pg. 2, par. 12, 13).

Carl however fails to teach pen pressure that is pressure applied to the pen tip of an input pen, displaying a three-dimensional pointer on the extension of the axis of the input pen in the three-dimensional space; and changing a coordinate of the three-dimensional pointer in the direction of the extension in the three-dimensional space

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according to the pen pressure of the input pen, and displaying the three-dimensional pointer based on the changed coordinate.

Geshwind discloses a display system for creating three-dimensional image information, analogous in art with that of Carl, comprising pen pressure that is pressure applied to the pen tip of an input pen (Geshwind, col. 7, ll. 62-63),

displaying a three-dimensional pointer on the extension of the axis of the input pen in the three-dimensional space (Geshwind, col. 7, ll. 51-63);

and changing a coordinate of the three-dimensional pointer in the direction of the extension in the three-dimensional space according to the pen pressure of the input pen, and displaying the three-dimensional pointer based on the changed coordinate (Geshwind, col. 7, ll. 51-63).

At the time the invention was made, it would have been obvious to one having ordinary skill in the art to modify the three-dimensional pointing method of Carl to comprise pen pressure that is pressure applied to the pen tip of an input pen, displaying a three-dimensional pointer on the extension of the axis of the input pen in the three-dimensional space; and changing a coordinate of the three-dimensional pointer in the direction of the extension in the three-dimensional space according to the pen pressure of the input pen, and displaying the three-dimensional pointer based on the changed coordinate, as taught by Geshwind.

As one of ordinary skill in the art would appreciate, the suggestion/motivation for doing so would have been combining prior art elements according to known methods to

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yield predictable results, namely, using pen pressure as a z-axis input for a display device.

In reference to claim 13, Carl teaches a three-dimensional pointing apparatus for generating a pointer based on two-dimensional coordinates of a position that is pointed at by a pen tip of an input pen on a predetermined detection plane (Carl, Fig. 5; pg. 6, par. 66),

comprising: an input information obtaining unit configured to obtain information on the two-dimensional coordinates (Carl, Abstract);

a pointer position/rotation angle calculation unit configured to calculate a position and a rotation angle of the pointer based on the information obtained by the input information obtaining unit (Carl, Fig. 5; pg. 2, par. 12, 13),

wherein the pointer position/rotation angle calculation unit changes a depth direction coordinate of the three-dimensional pointer to be displayed in the three-dimensional space (Carl, Fig. 5; pg. 2, par. 12, 13),

in addition to the information of the two-dimensional coordinates, the input information obtaining unit obtains an inclination angle that is an angle between an axis of the pen and the detection plane (Carl, Fig. 5; pg. 2, par. 12),

and a direction angle that is an angle between a projection of the axis of the input pen onto the detection plane and a predetermined line on the detection plane (Carl, Fig. 5; pg. 2, par. 12, 13),

and the pointer position/rotation angle calculation unit obtains an extension of the axis of the input pen in the three-dimensional space based on the inclination angle and the direction angle of the input pen (Carl, Fig. 5; pg. 2, par. 12, 13),

a pointer generation unit configured to generate the pointer based on the calculation result of the pointer/rotation angle calculation unit (Carl, Fig. 5; pg. 2, par. 12, 13);

sets a position of a three-dimensional pointer to be on the extension in the three-dimensional space (Carl, Fig. 5; pg. 2, par. 12, 13),

and performs the calculation by changing a coordinate of the three-dimensional pointer in the direction of the extension in the three-dimensional space (Carl, Fig. 5; pg. 2, par. 12, 13).

Carl however fails to teach generating a pointer based on pen pressure that is pressure applied to the pen tip of the input pen, displaying the generated pointer at a desired point in three-dimensional space represented on a display apparatus to perform pointing, comprising: an input information obtaining unit configured to obtain information on the pen pressure of the input pen; to be displayed in the three-dimensional space represented on the display apparatus; a pointing determination unit configured to determine whether there is an object that is pointed at by the pointer generated by the pointer generation unit in the three-dimensional space represented on the display apparatus; an object generation unit configured to generate the object to be displayed in the three-dimensional space represented on the display apparatus; a display control unit configured to display the pointer generated by the pointer generation unit and the

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object generated by the object generation unit in the three-dimensional space represented on the display apparatus, and calculation according to the pen pressure of the input pen in the calculation.

Geshwind discloses a display system for creating three-dimensional image information, analogous in art with that of Carl, comprising generating a pointer based on pen pressure that is pressure applied to the pen tip of the input pen (Geshwind, col. 7, ll. 62-63),

displaying the generated pointer at a desired point in three-dimensional space represented on a display apparatus to perform pointing (Geshwind, col. 7, ll. 51-63),

comprising: an input information obtaining unit configured to obtain information on the pen pressure of the input pen (Geshwind, col. 7, ll. 51-63);

to be displayed in the three-dimensional space represented on the display apparatus (Geshwind, col. 7, ll. 51-63);

a pointing determination unit configured to determine whether there is an object that is pointed at by the pointer generated by the pointer generation unit in the three-dimensional space represented on the display apparatus (Geshwind, col. 4, ll. 23-35);

an object generation unit configured to generate the object to be displayed in the three-dimensional space represented on the display apparatus (Geshwind, col. 4, ll. 23-35);

and a display control unit configured to display the pointer generated by the pointer generation unit and the object generated by the object generation unit in the

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three-dimensional space represented on the display apparatus (Geshwind, col. 4, ll. 23-35),

and calculation according to the pen pressure of the input pen in the calculation (Geshwind, col. 7, ll. 51-63).

At the time the invention was made, it would have been obvious to one having ordinary skill in the art to modify the three-dimensional pointing apparatus of Carl, to comprise generating a pointer based on pen pressure that is pressure applied to the pen tip of the input pen, displaying the generated pointer at a desired point in three-dimensional space represented on a display apparatus to perform pointing, comprising: an input information obtaining unit configured to obtain information on the pen pressure of the input pen; to be displayed in the three-dimensional space represented on the display apparatus; a pointing determination unit configured to determine whether there is an object that is pointed at by the pointer generated by the pointer generation unit in the three-dimensional space represented on the display apparatus; an object generation unit configured to generate the object to be displayed in the three-dimensional space represented on the display apparatus; a display control unit configured to display the pointer generated by the pointer generation unit and the object generated by the object generation unit in the three-dimensional space represented on the display apparatus, and calculation according to the pen pressure of the input pen in the calculation, as taught by Geshwind.

As one of ordinary skill in the art would appreciate, the suggestion/motivation for doing so would have been the well known use of a graphic arts input pen with a variable

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pressure tip in order to specify depth (Geshwind, col. 7, ll. 50-67), and to enable a graphic artist to use the angle or tilt on an input pen for 3-D modeling or sculpting (Geshwind, col. 25, ll. 1-8).

Claim 21 is rejected as being dependent on rejected claim 13 as discussed above and further, Carl modified by Geshwind teaches a computer readable storage medium including three-dimensional pointing instructions for causing a computer to execute processes in each unit of the three-dimensional pointing apparatus as claimed in claim 13 (Carl, pg. 2, par. 17; pg. 3, par. 83).

Response to Arguments

Applicant's arguments with respect to claims 2, 13 and 21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES HICKS whose telephone number is 571-270-7535. The examiner can normally be reached on Monday-Thursday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz, can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sumati Lefkowitz/

Supervisory Patent Examiner, Art Unit 2629